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# THE SERVICE THEORY OF VALUE,

BY

RUFUS FARRINGTON SPRAGUE.

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MANAGEMENT  
EDUCATION

In compliance with the expressed wish of the members of the American Economic Association, who so kindly listened to my paper on Value, I have had a limited number of copies struck off in pamphlet form in advance of the regular publication of the Association.

As no roll was called at this meeting, and it is manifestly impossible to now secure a correct list of those in attendance, I shall take the liberty to mail a copy of this pamphlet to all who might possibly have been present—that is to say, to all who, as members of the Association, are registered as in attendance at the Philadelphia meeting, Dec. 26th-29th, 1902.

This by way of explanation to those who, though not in attendance at the session in question, yet have this pamphlet thrust upon them.

Having spent the otherwise leisure moments of half a life time in pursuit of the truth, I have no ambition to promote error, nor to add in any way to the uncertainty, not to say confusion, that for more than a century has vexed the mind no less of scholar than of layman, concerning the true solution of this most elusive and baffling of problems. I therefore earnestly solicit the most rigid scrutiny, and invite the most unsparing criticism of this, the Service Theory of Value, as well as of the Service Theory of Exchange upon which it is based.

It is in this Service Theory of Exchange, as distinguished from what may be termed the "Product Theory," that the most radical departure from commonly accepted ideas will be found.

RUFUS F. SPRAGUE.

*Greenville, Mich., January 14th, 1903.*



# THE SERVICE THEORY OF VALUE.\*

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"The charm of novelty, at least, should attach to a philosophy of value, provided only that it prove to be the true one; for it is certain that in all that has been written on this much elucidated theme, a statement of the real nature of the thing discussed is not to be found." John B. Clark's *Philosophy of Wealth*, Chapter V, page 70.

"A recent writer—Böhm-Bawerk—has well said, 'There are certain unsettled questions in economic theory that have been handed down as a sort of legacy from one generation to another;' questions that 'return again and again, like troubled spirits doomed restlessly to wander until the hour of their deliverance shall appear.' Among these is the question, 'What is the ultimate standard of value?'" Charles William Macfarlane's *Value and Distribution*, page 19.

The foregoing quotations from comparatively recent publications are made, simply as a reminder of what a patent attorney would call, "the present state of the art."

## DISCOMFORT.

To the impulsive yearning for happiness may be traced every vital impelling principle of rational life.

By happiness is here meant, not happiness in a limited degree, but happiness unlimited, absolute, complete.

Such happiness is necessarily unattainable, and thus it is that man is the perpetual prey of unsatisfied desire—in other words, of discomfort. And it is in this broad sense that I shall use the term discomfort in this paper.

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\*Paper read before the members of the American Economic Association at Philadelphia December 28th, 1902.

## UTILITY.

While, strictly speaking, the term utility implies the relation of a means to an end, and separate and apart from the well-being or happiness of a subject there can be no utility, yet it is a well-nigh universal custom to so obscure the idea of relativity, as to enable us to ascribe utility to commodities and things of every sort that are endowed with qualities, properties, or potentialities fitting them for use or employment as a means of ministering to those ever present, but infinitely varying, desires for relief from discomforts felt, or regarded as impending in the immediate or remote future.

Employing the term in this, its popular sense, a catalogue of known utilities would embrace all things whatsoever, recognized as having available capacity to so minister to desire as to promote human happiness. Thus our list would embrace, not only things material and tangible, like food, clothing, and shelter, but things as intangible and evanescent as a strain of music, an eloquent gesture, or an inspiring thought.

Indeed, everything endowed with, or capable of being endowed with capacity to promote human happiness, will be regarded as having utility proportionate to its capacity to this end.

## PRICE.

Some of these things, as, for example, the air we breathe, are bestowed by nature with such lavish hand as to be had for the taking. Without conscious effort, the individual may appropriate them to the full measure of his demands, to be employed by him in relieving or warding off the discomforts which, without such ministration, must grieve,

vex, or torture him. Others, as, for example, food, clothing, or shelter, are not so lavishly bestowed. Indeed, by far the greater portion of those things deemed essential to health, comfort, happiness, and even life itself, are of this sort, and may not be had at all, except at such outlay of toil and energy, as of itself involves a penalty of discomfort that may approach, or, for that matter, measurably exceed in gravity, the discomfort that will result from the non-gratification of desire.

Now, these hindrances that, in every day life, are interposed between our desires on the one hand, and the possession and use of certain utilities on the other, this objective resistance, which, if overcome, must be overcome by laborious and onerous effort, is the price imposed by the conditions of our environment. Upon the payment of this price, by personal sacrifice of some sort, is frequently conditioned, not only our well-being and happiness, but, in many instances, life itself.

To the fact of price, which always implies resistance to be overcome, and is always objective, may be ascribed all rational activity; and such utilities as may be acquired without conscious effort may be ignored in this connection, since they are not, properly speaking, factors in economic activity.

### COST.

The personal discomfort or sacrifice of happiness attendant upon surmounting these difficulties, upon overcoming this resistance, upon putting aside these hindrances, upon paying this price, is cost.

As enforced effort of every sort becomes irksome in time, involving a penalty of fatigue or discomfort, cost, as a rule, will be measured by the discomfort or sacrifice of hap-

piness such expenditure of effort or energy involves. Thus cost always presents itself as an alternative discomfort, and implies some sort of personal sacrifice. Utilities that are acquired by the individual without sacrifice, are acquired without cost, and for such individual, at least, the utilities in question bear no price. Therefore, since price is always objective, and cost is always subjective, it is evident, that, but for the objective resistance termed price, the term cost-discomfort would have no significance.

## PRODUCTION.

Production implies an intelligent application of effort or energy, to the task of overcoming the difficulties that, in our dealings with nature or environment, constitute price. The factors generally recognized in production are land, labor, and capital; but in addition to these, and most important of all, should be mentioned productive intelligence. The first, land, affords opportunity; the second, labor, furnishes the physical energy necessary to the employment of nature's forces; the third, capital, supplies the instrumentalities employed as auxiliary to other things. But that power that discerns and turns to best advantage the productive qualities of land, that most effectively directs the application of productive effort or labor, and that devises the most effective instrumentalities for aiding and augmenting physical effort, is productive intelligence.

Thus production involves an application of both mental and physical energy to the task of so guiding, directing or manipulating the available forces of nature as to effect such changes or modifications in the relations of things in time and space as to increase their adaptability or availability as a means of adding to the sum of human happiness.

While what may be termed the gross utility of each productive effort will be measured by the utility of its product,

its net utility can never exceed the utility of such product minus the disutility or cost-discomfort attendant upon the effort that surmounts its price.

### GAIN AND LOSS.

To the extent in which our expectations are realized—that is, to the degree in which the thing acquired promotes happiness in excess of the happiness sacrificed as cost—does gain attend the transaction. Gain implies utility plus, or added happiness. And the hope of gain is the source and fountainhead of all rational, and therefore of all economic activity, for the terms are practically synonymous. Thus gain is a relative term, implying happiness *plus*. It results no less certainly from a diminution of cost-discomfort, than from augmented utility of the product of a productive effort. It stands for the difference between these two.

Loss is the reverse of gain. It implies happiness *minus*. It results, not from intelligent purpose or design, but from ignorance, fortuitous circumstances, or disaster.

Briefly, loss is the product of error. It implies not happiness *plus*, as does gain, but happiness *minus*.

### SERVICE.

Were man an isolated or solitary being, a condition precedent to his acquisition of any price-bearing utility would be the self-infliction of the specific cost-discomfort attendant upon surmounting its price-resistance; and further inquiry into the methods or motives of his activities would be superfluous, since each for himself must find a true solution of life's problems, in the employment of his productive powers in channels yielding the maximum of utility with the minimum of cost-discomfort.

As a member of society, however, be the same primitive or highly organized, the complexity of the problem that confronts him is increased indefinitely. No longer compelled to rely upon his own unaided efforts, he may now avail himself of the services of others, conditionally obtainable, as a means of acquiring certain price-bearing utilities without the infliction of the specific cost-discomfort that would attend their acquisition by a direct application of his productive powers to the task of surmounting their price.

The term service implies aid given, assistance rendered, by one to another in surmounting the price-resistance attendant upon the acquisition of a price-bearing utility. In other words, it implies an application of productive effort by one in behalf of another, that, by surmounting price-resistance, supplies that other with a desired utility, without the specific cost-discomfort that, but for the service rendered, must inevitably attend its acquisition by him.

Thus the prime, nay the sole, function of a service is to surmount price-resistance, and supply its beneficiary with a price-bearing utility, while sparing him the specific cost-discomfort attendant upon its production. As a means to this end, a service has a utility all its own—a utility, by the way, based, not upon the utility of its product, from which it is a thing apart, but solely upon the degree or gravity of the cost-discomfort its rendition averts.

Indeed, in every consideration of economic activity that involves the rendition of a service, a sharp distinction must be drawn between the utility of the service that supplies a thing, and the utility of the thing such service supplies. Thus, for example, the service that supplies me with water from the neighboring spring quenches no thirst, and is entitled to no credit for utility on that score. All that the service has accomplished in the way of adding to the sum of

my happiness, is embraced in the cost-discomfort its rendition averts.

Indeed, the utility of the water remaining constant, it is evident that the utility of a service that supplies it, will be governed by the price-resistance to be overcome. That is to say, it will increase with increased, and diminish with diminished distance or difficulties. In this instance, as in every other involving the rendition of a service, the utility of such service is strictly limited by—that is, it can never exceed—the cost-discomfort it averts in the fulfillment of its proper function, namely, the surmounting of price-resistance in behalf of its beneficiary.

Attention has heretofore been called to the fact, that, without price-resistance, the term “cost-discomfort” would have no significance. It is now equally evident, that, without the cost-discomfort incident to overcoming the price, service could have no utility, and the term service would be meaningless. As, without gain, there can be no incentive to productive effort (or rational activity of any sort), and to afford gain the cost-discomfort attendant upon such effort must be measurably less than the discomfort that would result from deprivation of the thing produced,—which, by the way, is the surest measure and only proof of a thing’s utility—it is evident that the maximum utility of a service will find its limitations in the cost-discomfort that may, with gain, be undertaken in the production of a given utility.

Thus the maximum utility of a service can never exceed the utility of its product, minus such gain as will serve as an incentive to the exchange. Any and every price-bearing utility acquired of, or through the aid, assistance, or instrumentality of another, is acquired through the service of that other. Such aid, assistance, or instrumentality, however remote, constituting a service that, under normal conditions, will or should impose upon the beneficiary a degree of obli-

gation proportionate to the degree in which cost-discomfort has been diminished by it—that is, proportionate to the utility of such service as a means of surmounting price-resistance.

Too much stress cannot be laid upon the fact that the only measure of a service's utility for him in whose behalf it is rendered, is the cost-discomfort it averts. Not only is there no direct connection between the utility of a service and the utility of its product, but there is no common standard of comparison between them, other than that of the discomfort attending the deprivation of any two given, but different, utilities.

### EXCHANGE.

Unfortunately for our happiness, or for that which at first glance might seem in very great measure to involve it, services can no more be had for the asking than can the price-bearing utilities it is their function to supply. Indeed, we find, not only that services bear price no less inexorably than their products, but that, as a rule, such price is based upon, and finds its equitable measure in, the character of the price-resistance overcome.

While Nature is impartial, and the price-resistance imposed by her remains unchanged regardless of our needs, man is less considerate in the disposal of his services, and rarely hesitates to take advantage of his opportunities and our necessities to demand increased compensation for his services.

Thus, in the event of monopoly or of scarcity, he may base his demand for compensation for his service —i. e., his price—not upon an equitable basis, but upon what he conceives to be our needs. Indeed, if, under such circumstances, he fails to place an extortion-

ate price on his service, it is usually from considerations of expediency rather than of right.

An exchange of services presents itself as an alternative to the cost-discomfort attendant upon the production of the desired commodity.

It is an old adage, trite but true, that "it takes two to make a bargain." Now, a bargain, as we know, is neither more nor less than a mutual understanding or agreement between two parties, fixing the terms and conditions for a contemplated exchange of services. The only terms upon which, under normal conditions, we are able to secure the services of another in our behalf, are that we stand prepared to render him an acceptable compensatory service.

In every complete exchange, each party to it renders the other a service, the service rendered by each being accepted by the other as full compensation for the service rendered by him. Thus, primarily, an exchange implies an interchange of mutually compensatory services. A condition precedent to the consent of each party to an exchange, is that, in the fulfillment of its terms, each for himself shall gain. Now, to insure gain for each in a transaction of this sort, it is essential that the service undertaken by each shall be rendered with less cost-discomfort to him than would attend the production of the thing it is the province of the compensatory service of the other to supply.

It is thus through the instrumentality of an exchange of service for service, involving what has aptly been termed the "mechanism of an exchange," that we are enabled to avail ourselves of the services of others, as a means of acquiring certain price-bearing utilities with cost-discomfort not only different in character, but measurably less in degree, than would otherwise necessarily attend their acquisition by us.

We have seen that there is no necessary relation between the utility of a thing and its price, and since the sole function of a service is to avert cost-discomfort by surmounting price, it is evident that there can be no necessary relation between the utility of a service that supplies the thing and the utility of the thing such service supplies.

The controlling factors in every exchange are the services involved in the exchange, and not the products of these services. Indeed, services, and not the things these services supply, are the real utilities, in a certain sense the real products, with which we have to deal in every contemplated exchange. That is to say, it is in the relative utility for each, of the services involved in the transaction, and not in the relative utility for each, of the things these services supply, that we find the measure of loss or gain that dominates the terms of every exchange.

Thus, regardless of the relative utility of the things parted with and acquired through the instrumentality of an exchange of services, the gain resulting from the transaction will equal the cost-discomfort averted by the service in our behalf, minus the cost-discomfort imposed upon us by our rendition of the compensatory service.

If, however, through error in judgment, the cost-discomfort imposed upon us by the rendition of a compensatory service exceeds the cost-discomfort averted by the service in our behalf, we shall lose by the transaction, even though the thing acquired through such service has utility a hundred, or, for that matter, a thousandfold greater than the utility of the thing parted with. This seeming paradox but emphasizes the fact that we gain or lose by an exchange only as the cost-discomfort attendant upon the acquisition of a price-bearing utility is increased or diminished thereby, the

relative utility of the things exchanged having no part in determining the attendant gain or loss.

As a rule, the rendition of a compensatory service involves, not only the production of a price-bearing utility, but the parting with it as well. If, now, the deprivation of this utility imposes a cost-sacrifice greater in degree than that which attends its production, or reproduction, then will the cost-discomfort resulting from the deprivation represent the true cost-discomfort. It must not be supposed, however, that this implies a balancing or weighing of the cost-discomfort attending the deprivation of the thing parted with, against the discomfort that would result from the deprivation of the thing acquired—that is, the utility of the one against the utility of the other. In an exchange the cost-discomfort or sacrifice imposed by its terms, is balanced only against the cost-discomfort averted. Always disutility against disutility. And we gain or lose only as the disutility of cost is diminished or increased by the transaction. Furthermore, it is evident that, in the absence of the permanent impairment of the productive powers through fatigue, or of the opportunity to produce, through the exhaustion of raw material, or some equally potent cause or causes, the thing in question will be promptly reproduced, in which event the cost-discomfort attendant upon deprivation will be measured only by the fatigue incident to its reproduction, plus the discomfort resulting from the temporary deprivation.

The only incentive to an exchange is gain. In every gainful exchange—and without gain there would be no incentive to the transaction—the utility of the service in our behalf equals the disutility of cost imposed upon us by the rendition of the compensatory service, plus the gain incentive. The utility of the thing acquired through an exchange of services remaining con-

stant, the utility of the service that supplies it will increase with increased, and diminish with diminished, price.

### VALUE.

Assuming free access to the opportunities so generously provided by nature in our environment, we measure the gross utility of our own productive effort by the utility of its product, and its net utility, or gain, by the utility of its product minus the disutility, or cost-discomfort incident to its production.

On the other hand, in the consideration of the productive efforts or services of others in our behalf secured through an exchange, we are less generous in the bestowal of the credit that may be traced to favorable conditions of environment, and, refusing to consider the utility of the product as a factor in the transaction, insist upon measuring the utility of such service by the character of the price-resistance it surmounts, and the net utility, or gain, resulting from the exchange, by the cost-discomfort averted, minus the cost-discomfort imposed by the rendition of the compensatory service by us.

We have here two separate and distinct concepts of utility, differing not only in character, but in degree. Thus, in the first instance, utility is predicated upon the utility of the product. In the second it is predicated solely upon the utility of the service that supplies this product—in other words, upon the utility of the service as a means of averting the cost-discomfort attendant upon producing it.

It is in this utility of a service in supplying a thing, as distinguished from the utility of the thing this service supplies, that we find the marked distinction between concepts of value and concepts of utility.

The confusion attendant upon the discussion of this subject is due to failure to thus differentiate between these two terms—in other words, to the universal custom of ascribing to the product of a service that measure of utility that has its origin and direct limitations only in the utility of a service that supplies it.

This, too, though we know full well that the product in question has a utility all its own—a utility not only quite independent of, but differing in character and degree from, the utility of the service thus erroneously ascribed to it.

Without losing sight of the limitation that the utility of a product places upon the utility of the service that supplies it—that is, the utility of the service can never exceed the utility of the product—it is evident that, barring this, the utility of the product has no part or influence in determining the utility of such service, and it is equally evident that this service utility varies with price-resistance, and with price-resistance only.

While there can be no value without utility, the converse of this is not true. Thus, though the air we breathe has the highest utility, a service that supplies it has no value—that is, no service utility. So, too, though water is essential to life, and consequently of the greatest utility, a service that supplies it will, as a rule, have little value. The reason for this is found in the fact that, in the first instance, there being no price-resistance to be surmounted, there can be no service, in the proper sense of that term, while in the second, since the price-resistance to be surmounted is trifling, the utility of the service that surmounts it is equally trifling. In short, within the limitations fixed by the utility of a product, the value of a service that supplies it will vary with the gravity of the price-resistance to be surmounted.

Increased value of a service in our behalf, like in-

creased utility of a product possessed, implies increased happiness. One is no less utility than the other. The former is applicable exclusively to services; the latter, to their products.

Thus value is service utility. It is properly applicable, not to the products of services, but solely to the services that supply products.

The difficulty incident to maintaining this distinction is magnified by failure to bear constantly in mind the fact, not only that there is an exchange of services involved in every transaction of this sort, but also that the services, and not the utility of their products, are the dominant factors in the exchange. We give expression to the concept of a product's value in terms of the product of what is regarded as an equivalent service—i. e., a service that surmounts an equivalent price-resistance,—or what is regarded as a compensatory service—i. e., a service that is, or in your judgment should be, acceptable to him in whose behalf it is rendered. Yet, though thus invariably stating the comparison as between utility of product and utility of product in negotiating an exchange, a moment's reflection is all that is necessary to convince one that the fundamental comparison is always, though perhaps unconsciously, not between the utility of the products under consideration, but between the services that, by surmounting price-resistance, supply them. In other words, the distinction between the utility of a product and the utility of a service that supplies it—i. e., its value,—though difficult to maintain in discussing this subject, is always intuitively recognized in practical life.

Thus, when I assert that commodities A and B have the same utility, I arouse an entirely different train of thought than when I assert that they have the same value.

The statement that they have the same utility instantly impels you to make a mental inventory of their respective properties. In comparing the sums of such properties, you unconsciously take cognizance of the fact that while, under given conditions, the utility of both might be the same, under other circumstances, just as likely to arise, it might differ widely. Thus you could give at most only a qualified assent.

When, however, I assert that the *value* of A and B is the same, your mind reverts, not, as in the preceding case, to their respective properties, and to conditions under which such properties would avert or relieve discomfort, but to the difficulty of procuring each—in other words, to their price-resistance; and if in your judgment such price-resistance was the same, you would unhesitatingly concede their value—that is, the utility of a service that would supply them—to be the same, and that, therefore, the price of such service should, in equity, also be the same.

Thus, as prefaced, in practical life a wide distinction is always intuitively made between the utility of a product and the utility of a service that supplies it—in other words, its value.

Two products will be regarded as having equivalent value when the price-resistance attendant upon the production of each is equivalent, absolutely regardless of their respective utility. So, too, will they be regarded as having equivalent value when in the acquisition of each through exchange, the same price-resistance must be surmounted or the same compensatory service rendered.

While it is undoubtedly true that the individual regards two products as having the same value when the cost-discomfort to him attendant upon the production of each is the same in degree, yet, owing to the

unequal opportunities and instrumentalities of men, together with their different degrees of physical power and productive intelligence, the cost-discomfort attendant upon surmounting the same price-resistance will vary, and is therefore a less equitable basis of exchange than price-resistance.

To sum up:

Value is service utility—service utility always—never product utility.

Value is to a service that supplies a product what utility is to the product supplied, the term value, no less than the term utility, implying capacity for usefulness.

Not only is value inherent in, but it is of the very essence of service. So true is this that we are perfectly warranted in saying, not only that without value there can be no service, but, conversely, that without service there can be no value. Neither can exist without the other.



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